EXECUTIVE ORDER A-021-0367-1 New On-Road Heavy-Duty Engines

Pursuant to the authority vested in the Air Resources Board (ARB) by Health and Safety Code (HSC) Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order (EO) G-02-003; and

Pursuant to the December 15, 1998 Settlement Agreement (SA) between ARB and the manufacturer, and any modifications thereof to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

		<u> </u>							
MODEL YEAR ENGINE FAMILY 2004 4CEXH0681MAU		ENGINE SIZE (liter)	FUEL TYPE (CNG/LNG=compressed/liquefied natural gae; LPG=liquefied petroleum gas)	STANDARDS & TEST PROCEDURE	(L/MH HDD=light/medium/heavy heavy-duck				
		10.8	Diesei	Diesei					
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS		ENGINE MODELS / CODES (rated power in horsepower, hp)							
PCM, EGR, DDI TC, CAC		SEE ATTACHMENT							
gas recircular (prefix)=parai	ion. AlResacondary sir is	jection PAIR	ray/oxidizing catalyst WU (preftx) =warm-up cat. IMPI DDi/IDi=direct /indirect diesel injection TC =pulsed AIR SPL=smoke puff limiter ECM/PCMet bon NMHC=non-methane HC NOx=oxides of ni sepower-hour	nor-unionsuber cut	irger GAC=charge air cooler EGR=exhaust				

The following are the exhaust emission standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT), in g/bhp-hr, for this engine family under the "Federal Test Procedure" (FTP) (Title 13, California Code of Regulations, (13 CCR) Section 1956.1 (urban bus) or 1956.8 (other than urban bus)), and under the "Euro III Test Procedure" (EURO) in the Settlement Agreement, including EURO's "Not-to-Exceed" standard(s). "Diesel" CO certification compliance may have been demonstrated pursuant to Code of Federal Regulations, Title 40, Part 86, Subpart A, Section 86.091-23(c)(2)(i) in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR Section 1956.1 or 1956.8 are in parentheses.)

	·				EUF	O'S NTE	NMHC:	0.625	NOx: *		NMHC+	NOx: 2.875	PM:	0.125
* = not applicable	нс		NMHC		NOx		NMHC+NOx		СО		PM		нсно	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
(DIRECT) STD	•	•	0.5	0.5	•	*	•	•	15.5	15.5	0.10	0.10	•	•
AVERAGE STD		•	*	•	• .	•		•		•	•	*	*	-
FEL	•	•		•	•	 •	2.3	2.3			•			•
CERT	•	•	0.2	0.1	*		2.0	2.1	0.8	0.4	0.10	0.08	*	

BE IT FURTHER RESOLVED: That certification to the FEL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR Sections 1965 (emission control labels), and 2035 et seq. (emission control warranty).

BE IT FURTHER RESOLVED: That the listed engine models are conditionally certified subject to the following conditions: (1) The SA is in effect; (2) The manufacturer is in compliance with all applicable certification requirements of the SA and any modifications thereof.

Engines certified under this Executive Order shall conform to all applicable California emission regulations and all requirements under the Settlement Agreement and any modifications thereof.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

This Executive Order hereby supersedes Executive Order A-021-0367 dated January 26, 2004.

Executed at El Monte, California on this ______ day of October 2004.

Allen Lyons, Chief

Mobile Source Operations Division

A-021-0367-1

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Cummins Inc. Manufacturer:

On-highway HDDE Engine category:

4CEXH0661MAU EPA Engine Family.

3530 Mfr Family Name:

Running Change Process Code:

A-021-0367-1 PCM, EGR, TC, CA (lbs/hr)@peak torque Device Per SAE J1930 PCM, EGR, TC, 9. Emission Control PCM, EGR, TC, 8 8 66 93 83 100 100 93 93 66 96 93 93 93 8 66 92 92 92 92 96 mm/stroke@peak torque 7.Fuel Rate 244 229 229 229 244 229 244 237 244 229 210 237 229 229 210 \$ 194 194 6.Torque @ RPM (SEA Gross) 1250@1200 1200@1200 1250@1200 1150@1200 1150@1200 1150@1200 1250@1200 1200@1200 1150@1200 1150@1200 1150@1200 1150@1200 1250@1200 1150@1200 1250@1200 1250@1200 1150@1200 1150@1200 1150@1200 1150@1200 1200@1200 (lbs/hr) @ peak HP (for diesels only) 5. Fuel Rate: 131 114 114 114 114 114 120 131 121 131 131 121 136 127 120 120 120 139 mm/stroke @ peak HP (for diesel only) 199 188 188 188 215 216 199 188 88 190 187 188 178 166 166 166 187 194 3.BHP@RPM (SAE Gross) 370@1800 380@1800 340@1800 319@1800 320@1800 320@1800 320@1800 370@1800 380@1800 320@1800 340@1800 319@1800 320@1800 320@1800 370@1800 340@1800 320@1800 320@1800 320@1800 320@1800 380@1800 2. Engine Model **SM 330ST ISM 320V SM 330ST** ISM 310 ISM 330ST **ISM 285V ISM 285V ISM 320V SM 320V ISM 285V ISM 380 ISM 330 ISM 310 ISM 280 ISM 380 ISM 330 ISM 310 ISM 280 ISM 330 ISM 280 ISM 380** Engine Code 8273;FR2975 8273;FR2976 8505;FR2985 8505;FR2976 8505;FR2975 8556;FR2975 8556;FR2976 8273;FR2985 8273;FR2981 8273;FR2982 8273;FR2962 8505;FR2961 8505,FR2982 8505;FR2962 8556;FR2985 8273;FR2961 8505;FR2981 8556;FR2961 8556;FR2962 8556;FR2981 8556;FR2982

* Attachment *